

POBEZHIMOV, Ivan Fedorovich; KONYUSHENKO, I.A., red.; ROMANOV, P.I.,
red.; SORKIN, M.Z., tekhn. red.

[What the draftee must know about service regulations]
Chto nuzhno znat' prizyvniku o voinskikh ustavakh. Moskva,
(MIRA 16:7)
Izd-vo DOSAAF, 1963. 83 p.
(Russia--Armed forces--Regulations)

O
ROMANOV, P. M.

Zhelieznodorozhnyi vopros v Persii i miery k razvitiu russkopersidskoi torgovli.
/Railroad question in Persia and measure for development of Russian-Persian trade/7.
(C kartoiu Persii). S.-Peterbur, 1891. 64 p. fold. map. DLC: HE3367.R7

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress,
Reference Department, Washington, 1952, Unclassified.

YEREMIN, Yu.G.; ROMANOV, P.N.

Determination of trace amounts of boron with methylene blue.
(MIRA 16:5)
Zav.lab. 29 no.4:420 '63.

1. Volgogradskiy nauchno-issledovatel'skiy institut tekhnologii
mashinostroyeniya.
(Boron--Analysis) (Methylene blue)

ACC NR: AP7005537

SOURCE CODE: UR/0075/66/021/011/1303/1306

AUTHOR: Yeremin, Yu. G.; Rayevskaya, V. V.; Romanov, P. N.

ORG: Polytechnic Institute, Volgograd (Politehnichskiy institut); All-Union Scientific Research Design Institute of Technology of Chemical and Petroleum Machinery, Volgograd (Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut tekhnologii khimicheskogo i neftyanogo apparatostroyeniya)

TITLE: The use of tributyl phosphate for the extraction of microamounts of cerium in the analysis of steels

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 11, 1966, 1303-1306

TOPIC TAGS: cerium, cerium analysis, metal analysis, tributyl phosphate, extraction photometric method

ABSTRACT: A method for determining down to 0.005% of cerium in alloy steels is presented. Cerium is separated by extraction with tributyl phosphate and coprecipitated as oxalate on a lanthanum or calcium collector. Cerium is then determined by an extraction-photometric method by means of methylene blue. The

UDC: 543.70

Card 1/2

'ACC NR: AP7005537

relative experimental error of the determinations is 2-6%. Orig. art. has:
1 diagram, and 2 tables. [Authors' abstract] [KP]

SUB CODE: 11,07/SUBM DATE: 18Jan65/ORIG REF: 003/OTH REF: 001/

Card 2/2

ACC NR: AP7008603

(A)

SOURCE CODE: UR/0075/67/022/001/0065/0069

AUTHOR: Savvin, S. B.; Dedkov, Yu. M.; Romanov, P. N.

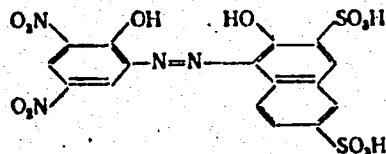
ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii AN SSSR); All-Union Scientific Research and Planning Institute of Chemical and Petroleum Instrumentation Technology, Volgograd (Vsesoyuznyy nauchno-issledovatel'skiy i proyektornyy institut tekhnologii khimicheskogo i neftyanogo apparatostroyeniya)

TITLE: Determination of zirconium in high-alloy steels using picramine R and arsenazo III

SOURCE: Zhurnal analiticheskoy khimii, v. 22, no. 1, 1967, 65-69

TOPIC TAGS: zirconium, photometric analysis

ABSTRACT: A direct extractive-photometric method was developed for determining 0.01-1.0% zirconium in alloy steels with a relative error of 3-13%, picramine R



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UDC: 543.70

ACC NR: AP7008608

being used in the presence of up to 23% Cr, 13% Ni, 0.11% Cu, 3% W and other elements. A combined method is proposed (relative error 1-10%) for determining 0.04%-5% zirconium, involving the simultaneous use of picramine R and arsenazo III in the presence of up to 1% Nb and 6% Mo in addition to the above-mentioned elements. For both methods, variants were developed for the differential determination of zirconium. The error of the determination for the differential variants does not exceed 2.0%. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 29Dec65/ ORIG REF: 008/ OTH REF: 001

Card 2/2

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6

YEREMIN, Yu.G.; LAVROVA, L.A.; RAYEVSKAYA, V.V.; ROMANOV, P.N.

Current methods for determining small quantities of cerium. Zav.lab.
(MIRA 18.1)
30 no.12:1427-1433 '64.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6"

GUZEV, Yefim Matveyevich; DESYATNIK, Yudko Froimovich; ROMANOV, D. G.
Nikolaevich; KHOROSHILOV, Vasiliy Ivanovich; ZHILO, M.Ye.,
redaktor; AVRUTSKAYA, R.F., redaktor izdatel'stva; KARASEV, A.I.,
tekhnicheskiy redaktor

[Safety engineering in the preparation, loading, unloading and
reprocessing of ferrous scrap] Tekhnika bezopasnosti pri zagotovke,
pogruzke, razgruzke i pererabotke loma chernykh metallov. Moskva,
Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii;
1957. 103 p.
(Scrap metal industry--Safety measures)

(MLRA 10:9)

ROMANOV, P.N.

Using the balance method in mechanizing the accounting of
material values. [Izd.] LONITOMASH 44:173-180 '58.

(MIRA 11:9)

(Machine accounting)

YEREMIN, Yu.G.; LAVROVA, L.A.; RAYEVSKAYA, V.V.; ROMANOV, P.N.

Use of organic reagents for determining microimpurities in
metals and alloys. Prom.khim.reak. i osobo chist.veschch. no.3:
(MIRA 17:4)
22-48 '63.

86-58-6-26/34

AUTHOR: Romanov, P. N.

TITLE: Heroic Deed of a Komsomol (Podvig komsomol'tsa)

PERIODICAL: Vestnik vozduzhnogo flota, 1958, Nr 6, p 77 (USSR)

ABSTRACT: The author describes briefly how Komsomol Member Jun Lt Viktor Del'nev, a pilot of the 569th Shturmovik Regiment, attacked an enemy artillery position and then, after his aircraft was set on fire, decided not to bail out but instead dived his aircraft into the enemy field artillery position. There is one photograph.

AVAILABLE: Library of Congress

Card 1/1

S/032/63/029/004/004/016
A004/A127

AUTHORS: Yeremin, Yu.G., Romanov, P.N.

TITLE: Determining micro-quantities of boron by means of methylene blue

PERIODICAL: Zavodskaya laboratoriya, no. 4, 1963, 420

TEXT: The authors experimentally checked the assertion of Sh. Wakamatsu (Japan. Analyst, 7,5, 309, 1958) on the non-volatility of boron in determining micro-quantities with the aid of methylene blue. Hydrofluoric acid was replaced by an ammonium fluoride solution and, instead of a 2-hour holding of the mixture, it was heated to boiling point. To eliminate the negative influence of large amounts of tungsten in analyzing high-alloy steel, the non-soluble carbides were fused with potassium pyrosulfite. A description of the determination procedure is given.

ASSOCIATION: Volgogradskiy nauchno-issledovatel'skiy institut tekhnologii mashinostroyeniya (Volgograd Scientific-Research Institute of Machine Building Technology)

Card 1/1

ROMANOV, P.N.
KATS. V.M.; ROMANOV, P.N.

Bershad Sugar Factory is 130 years old. Sakh. prom. 31 no.12:23-25
(MIRA 11:1)
D '57.

1. Vinnitskiy sovnarkhoz.
(Bershad--Sugar industry)

ROMANOV, P.N., inzhener.

High-speed grinding. Mashinostroitel' no.4:16-18 Ap '57.
(MLRA 10:5)

(Grinding and polishing)

GLEBOV, M.A., kand.sel'skokhoz.nauk; ROMANOV, P.P.; STEPINA, V.G.,
Uchenyy agronom

Profitableness in the protection of vegetable crops. Zashch.
rast.ot vred.i bol. 5 no.7:10-11 J1 '60. (MIRA 16:1)

1. Glavnny agronom sovkoza "Vyborgskiy", Leningradskoy obl.
(Vegetables--Diseases and pests) (Plants, Protection of)

CHINCHEVICH, V.I.; ROMANOV, P.P.

Ten-year experience in planting oak in clusters in the Donets Basin. Agrobiologija no.5:746-748 S-0 '61. (MIRA 14:10)

1. Donetskiy sel'skokhozyaystvennyy tekhnikum.
(Donets Basin--Oak)

Romanov, P. R.

Matts

✓ 1764. Accelerating the grinding of non-plastics in ball mills.—P. R. ROMANOV (*Glass & Ceramics*, Moscow, 13, No. 3, 20, 1956). In Russian. In most plants all the non-plastic components of a whiteware body (quartz sand and pitchers) are ground together in a ball mill. The author considers that it would be better if sand were charged 5-6 hr. before the pitchers, because it is much harder. Experiments showed that grinding-time can then be reduced from 16-18 hr. to 9-10 hr. (3 tables.)

JSP/RHP
MM

MISHULOVICH, L. Ya.; ZAYONTS, R.M.; ROMANOV, P.R.

Saggerless firing of ceramic floor tiles. Stek. i ker. 14 no.1:19-
23 Ja '57. (MIRA 10:3)

1. Khar'kovskiy (Losevskiy) plitochnyy zavod.
(Kharkov--Ceramic industries) (Tiles)

Romanov P. R.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62317

Author: Romanov, P. R.

Institution: None

Title: Accelerated Grinding of Thinning Materials in Ball Mills

Original
Periodical: Steklo i keramika, 1956, No 3, 20-21

Abstract: The procedure practiced at tile manufacturing plant of a conjoint grinding of the components of thinning materials (quartz sand and body) is deemed inappropriate, since it does not take into account the physical properties of the materials being ground. To intensify the grinding it is necessary to change over to a separate grinding of thinning materials, i.e., first charge into the ball mill the harder quartz sand, which must be ground for 5-6 hours, and after the sand has been comminuted add into the ball mill the relatively soft faience body and carry out a conjoint grinding until

Card 1/2

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62317

Abstract: the necessary degree of dispersion of the final product is reached. Experiments conducted at the Katuarovsk plant have shown that the combined grounding procedure makes it possible to increase the output capacity of ball mills by 25% without lowering the quality of the finished tiles.

Card 2/2

ROMANOV, P.R.

School work on local geography and conservation of nature.
Geog. v shkole 25 no.3:42-46 My-Je '62. (MIRA 15:7)

1. Ishakskaya shkola Chuvashskoy ASSR.
(Geography—Study and teaching)
(School excursions)

Mishulovich

1563. Firing of floor tiles without saggars.—L. YA MISHULOVICH, R. M. ZALONTS, and P. R. ROMANOV (*Glass and Ceramics*, Moscow, 14, No. 1, 1957). In Russian. Deals with the replacing of saggars in tunnel kilns by kiln furniture. Design of cars and furniture for various types of kiln is discussed. Tiles were fired for 74 hr. Firing without saggars gave more first-grade tiles but more rejects. Quality depends on position in the setting; tiles in the lower part are poorer than those above. Smokiness, spottiness and non-uniformity of colour accounted for 90% of the rejects. Chipped sides and corners also occurred. Tests reduced these defects. From the results, a 3-storey setting was designed, giving greater car capacity and a lower consumption of refractories. (4 figs., 2 tables.)

ROMANOV, P.R.

Saggerless baking of facing tiles in Hungary. Stek.1 ker. 13 no.6:
26 Je '56. (MLPA 9:8)
(Hungary--Ceramic industries)

ROMANOV, P.R.

Firing faience bathroom fixtures in Hungary without saggers.
Stek.1 ker. 13 no.5:29-30 My '56. (MLRA 9:8)
(Hungary--Ceramic industries) (Saggers)

AUTHOR: Mishulovich, L. IA.; Zayonts, R. M.; and Romanov, P. R.

TITLE: Sagger-less Firing of Ceramic Tiles for Flooring (Beskapsel'nyy obzhig keramicheskikh plitok dlya polov)

PERIODICAL: Steklo i Keramika, 1957, Vol. 14, No. 1, pp. 19-23 (U.S.S.R.)

ABSTRACT: Since firing of ceramic tiles in saggers requires special shops and significant labor which increases its cost of production by 10 - 11%, a sagger-less method of firing ceramic tiles in tunnel furnaces (extensively used in such countries as Czechoslovakia, Germany, Hungary, etc., and to some extent by the domestic industry) is considered. For this purpose, a series of tests were conducted in 1955 by the Losevskiy Collective Tile Factory in Kharkov (Kollektiv Khar'kovskogo Losevskogo plitochnogo zavoda), in cooperation with employees of the Scientific Research Institute for Structural Ceramics (NIIstroykeramika) to determine the economical and technological aspects and advantages of the sagger-less method. The tiles were fired in a tunnel-type No. 3 furnace, 113 m. in length, 1.85 m. in width, 1.3 m. in height, capable of accommodating 56 tile carts. The furnace

Card 1/2

Sagger-less Firing of Ceramic Tiles for Flooring

was heated with generator gas to about 1150 and 1200 cal/m³. Fig. No. 3 shows the firing temperatures. Figs. No. 1, 2, & 4 show various type carts used in the sagger-less method of firing. Comparative data on tile sorts obtained through both methods of firing, are shown in Table No. 1. Table No. 2 shows the average quality of tiles according to their placement on carts in a sagger-less firing.

There are no references.

ASSOCIATION: Losevskiy Tile Factory in Kharkov (Khar'kovskiy [Losevskiy] Plitochnyy zavod)

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

REMPEL', A.M.; SUKHOV, P.V.; KOPEYKIN, A.A., glavnny red.; ROKHVARGER, Ye. L., zamestite'l glavnogo red.; VASYUTINSKAYA, A.A., red.; GARTSMAN, B.M., red.; ZAYONTS, R.M., red.; LUNDINA, M.G., red.; NOSOVA, Z.A., red.; PETROV, N.A., red.; RIVKIN, A.M., red.; ROMANOV, P.R., red.; SOKOLOV, P.V., red.; FEYN, Yu.E., red.; KOSYAKINA, Z.K., red.; KASIMOV, D.Ya., tekhn.red.

[Research on clay materials] Issledovanie glinistogo syr'ia. Moskva, Gosstroizdat, 1963. 119 p. (Kuchino. Gosudarstvennyi nauchno-issledovatel'skii institut stroitel'noi keramiki. Trudy, no.22). (MIRA 17:3)

ROMANOV, P.R.

50341

Tyekhnicheskaya pchashch' Novaiyerusalimshomu kirpichnomy zavody. Trudy Obshchyesoyuz. nauch. - isslyed. in-ta strit. kyeramiki, vyp. 1. 1949, s. 12738

SC: LETCPIS! No. 34

ROMANOV, P.R.

Increasing the speed of grinding lean admixtures in ball mills.
Stek. i ker. 13 no.3:20-21 Mr '56. (MIRA 9:6)

1. Proyektno-konstruktorskoye byuro NIIstroykeramiki.
(Ceramic industries) (Crushing machinery)

Potter

1617. Ways of improving the quality of sanitary glassware.—I. S. DOSSOVOLSEY and P. R. ROMANOV (Stak. Krem., 7, No. 10, 19, 1960). Numerous small improvements carried out in a Russian plant are described. A new method of cooling was developed. Immediately after the firing was completed the temp. in the kiln was lowered to 700°-750° C.; this reduces the cooling time and gives a brighter glass. There is no cracking. Cooling during this period is with the chimney damper open. The draught in the kiln reaches 3-5 mm. w.g. From 600° to 400° C. (quartz conversion) the cooling is carried out more slowly (30°-40°/hr.) and thereafter it can be slightly accelerated again. (1 fig., 1 table.)

*B C S**Ceramic Products
Pottery*

104. Overcoming difficulties in the production of facing tiles. - S. V. Novozhilov et al.
P. M. Mamontov (USSR, Patent, No. 6, 12, 1951). Experience at 2 Russian plants is described. The dry method of mixing and the plastic method of shaping are used. The batch consists of 44-50% of bend clay (white-burning and early-vitrifying) and 55-50% of grog from the same clay. The average grading of the grog is (%): 1-2 mm., 20-25; 1-0.5 mm., 20-30; and <0.5 mm., 45-55. Clay is ground so that 70-80% is <1 mm. Hot water is added to give a water content of 17.5-18.5%. The tempered mix is then treated either in an edge-runner mill or in a ribbon press. The most effective method of producing the tiles is by first making hollow blocks which are then split into 2 wall-tiles. This method makes it possible to avoid deformation of tiles during drying and firing, increases output, reduces fuel consumption and wt. of ware. A decisive advantage claimed for these products is their improved physico-mechanical properties. The products were shaped in vacuum presses (30 mm. Hg). Details are given on the elimination of lamination and other faults. Drying time is 1.6 days (according to the type of block) in a chamber or 40 hr. in a tunnel dryer. Firing is carried out in a ring or a chamber kiln. The most suitable top firing temp. is 1,100-1,200°C. for 2-4 hr. Crushing strength is 1,570 and 1,660 lb/sq. in. for corner and flat tiles, respectively. Water absorption is 4-5%. (4 figs., 1 table.)

BCA Romania, ROM

*mixing, formation,
shaping*

1953. De-aired mixes in the production of refractories.—M. A. RABINOVICH and P. B. BULANOV (*Ogneupory*, 16, 483, 1951). A discussion on the methods of producing facing tiles for the facade of the buildings of a new university in Moscow. A de-airing pug is used, without repressing. The tiles are made double, i.e. a hollow block is produced and then split into two. This reduces rejects in all production stages, almost doubles output, simplifies the whole process and increases the efficiency of dryers and kilns. One main advantage of tiles made of de-aired mixes is a considerable improvement of their physico-mechanical properties. Thus tiles with 1 in. thick walls were unaffected by 30 cycles of freezing, whereas 2-3 in. thick tiles, extruded without de-airing and repressed, cracked after 2-3 freezing cycles. Tile-blocks and specimens prepared from de-aired mixes were compared for slag resistance and thermal stability, with a type of firebrick and showed good results. It is concluded that de-airing mixes for factory products improves plasticity, increases bulk density, allows the introduction of 70% grog without detriment to plasticity, and also the production of some types of products with ribbon pugs without repressing. (4 figs., 4 tables.)

LOGACHEVA, L.N.; ROMANOV, P.S.

Correction for the heterogeneity of surfaces of end measurements of
lengths. Trudy VNIIM no.7:73-85 '49. (MIRA 11:6)

(Length measurement)

(Interferometry)

Romanov, P.S.

The application of precise methods in the study of ore
minerals. I. A. Pudovkina, P. S. Romanov, and E. N.
Naumova. Z. angew. Geol. 2, 102-11 (1950). A review of
methods for detg. hardness and reflectivity, and a comparison
of data obtained on several minerals by different authors.

Michael Fleischer

2 4
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ALEKSANDROV, N.I.; GEFEN, N.Ye.; GAPOCHKO, K.G.; GARIN, N.S.; GORDON, G.Ya.
KOZHUSHKO, M.I.; KORENEV, G.P.; LAZAREVA, Ye.S.; LEYKEKHMAN, Ye.P.;
MASLOV, A.I.; PAVLOV, G.A.; POLIVANOV, N.D.; ROMANOV, P.S.; RYBAKOV,
P.S.; RYBAKOV, M.G.; SAMOKHVALOV, M.F.; SMIRNOV, M.S.; SHIERN, M.A.;
CHEPKOV, V.N.

Experience with mass aerosol immunization with tularemia dust
vaccine. Zhur. mikrobiol., epid. i imm. 41 no. 2: 1-43 F '64.
(MIRA 17:9)

Mel'NIKOV, Georgiy Nekrassovich; ROBYLYANOV, Leonid Nikitovich;
VYSHINSKIY, V.Y., nauchn. red.; TOSHILINA, L.V., red.

[Combines for sugar beet harvesting] Sveklouboreshchye kom-
bainy. Moskva, Vysshiaia shkola, 1964. 185 p.

(MIRE 17:8)

1. Vsesoyuznyi nauchno-issledovatel'skiy institut mekhaniz-
atsii sel'skogo khozyaystva (for Mel'nikov).

S/123/59/000/09/18/036
A002/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 9, p. 104,
33632

AUTHOR: Romanov, P. V.

TITLE: The Nature of Intermediate Structures in the Light of Thermokinetic
Laws of Austenite Transition

PERIODICAL: V sb.: Materialy Nauchno-tehnich. konferentsii po probl. zakalki
v goryachikh sredakh i promezhutochn. prevrashcheniyu austenita,
I, Yaroslavl', 1957, pp. 102-118

TEXT: Thermokinetic transition curves were plotted for a great number of
alloy steels, among them high-alloy grades. Based on a study of the laws of
thermokinetic austenite transition of Fe-based alloys, the author arrives at
the conclusion that the intermediate austenite transition in alloy steels is
a polymorphous transformation of alloys of the type Fe-alloying element. The
diffusion of C, occurring during the austenite transition is a parallel process,
although it also shows a certain effect on the lattice re-arrangement. For a
given alloy the degree of polymorphous transition depends on the degree of

✓B

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S/123/59/000/09/18/036
A002/A001

The Nature of Intermediate Structures in the Light of Thermokinetic Laws of Austenite Transition

supercooling. The polymorphous transition is interrupted after an equilibrium between the old and the new phases has been reached. That part of austenite, which did not decompose, is partially transformed into a highly dispersed α -phase and carbide mixture, as a result of the continuous diffusion of C taking place after the termination of the polymorphous transition. Simultaneously, a tempering of the polymorphous austenite transition products, which are saturated with C, takes place. There are 9 figures and 10 references.

P. Ya. M.

Translator's note: This is the full translation of the original Russian abstract.

VB

Card 2/2

80839

18.7100

SOV/123-60-1-1018

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1960, No 1,
p 130 (USSR)

AUTHOR: Romanov, P.V.

TITLE: Investigating the Corrosion Rate of Steel With the Aid of
Face-End Hardened Specimens

PERIODICAL: Tr. Khim. metallurg. in-ta, Zap. Sib. fil. AS USSR, 1958,
Nr 11, pp 37 - 45

ABSTRACT: The author suggests a new method of corrosion analysis which
was already tested with a number of steel grades, and which
makes it possible to replace the investigation of a series of
specimens with different structures by one face-end-hardened
specimen. It was found that martensite possesses the highest
corrosion resistance, while troostite has the lowest. The
corrosion resistance of intermediate structures approximates,
in some cases, that of martensite. The possibility is shown
to increase the corrosion resistance of machine parts having
a troostitic, sorbitic or pearlitic structure by annealing at

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80839

SOV/123-60-1-1018

Investigating the Corrosion Rate of Steel With the Aid of Face-End Hardened Specimens

temperatures higher than 400°C. A low-temperature annealing (up to 200°C) of martensite structure machine parts ensures their maximum corrosion resistance, while, on the contrary, such machine parts possess only a minimum of corrosion resistance after having been annealed at a temperature of 400°C.

S.V.M.

Card 2/2

ACC NR: AT6022250

SOURCE CODE: UR/0000/66/000/000/0003/0010

AUTHOR: Galimullin, V. N.; Romanov, P. V.

ORG: none

TITLE: Calculation of principal characteristics of the amplitron with a hard-spoke approximation

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio, 22d, 1966. Sektsiya elektroniki. Doklady. Moscow, 1966, 3-10

TOPIC TAGS: amplitron, platinotron, SHF amplifier

ABSTRACT: As the G. Domrowski method of approximate calculation of amplitron characteristics (Trans. IRE, 1959, ED-6, no. 4, 419-427) does not provide answers to many practical questions, a different method (J. Feinstein and G. Kino, Proc. IRE, 1957, no. 10, 1364-1373) is further developed. With four

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AT6022250

specified simplifying assumptions, equations for the part of electron paths that reaches the anode (ξ), the tube gain (G), the anode current (I), and the input (P_1) and output (P_2) powers are set up. The above characteristics are plotted, for several fixed values of relative tube resistance, as functions of frequency (detuning). The characteristics show that higher internal tube resistance and lower coupling resistance at the delay-structure surface cause narrower frequency band of the amplitron. Orig. art. has: 4 figures and 32 formulas.

SUB CODE: 09 / SUBM DATE: 09Apr66 / ORIG REF: 003 / OTH REF: 002

Card 2/2

S/137/61/000/002/029/046
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 2, p. 24 # 2Zh172

AUTHOR: Romanov, P. V.

TITLE: Thermokinetic Transformation of Austenite in Steels Alloyed with Chromium and Magnese, Chromium and Nickel

PERIODICAL: "Tr. Khim-metallurg. in-ta, Sib. otd. AN SSSR." 1960, No. 14, pp. 27-34

TEXT: Thermokinetic diagrams are plotted for steels 20XГ (20KhG); 35XГ2 (35KhG2); 50XГ2 (50KhG2); 55XГ2 (55KhG2); 20XH (20KhN); 40XH (40KhN) and 55XH (55KhN). The cooling time from a temperature exceeding by 50 degrees the upper critical point, to 100°C varied from 15,000 to 25 seconds. Hardness, demagnetization current intensity and a_c were measured on cooled-off specimens. It is shown that both Mn and Ni exert an equal effect on the nature of the thermokinetic diagram. The introduction of these elements entails the appearance of a separate area of intermediate transformation on the thermokinetic diagram. At an increased C content in the steel the rates at which the intermediate and martensite transformations appear, decrease, and the dimensions of the intermediate

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S/137/61/000/002/029/046
A006/A001

✓

Thermokinetic Transformation of Austenite in Steels Alloyed with Chromium and Manganese, Chromium and Nickel

transformation area are reduced.

L. V.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

137-58-6-11695

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 68 (USSR)

AUTHORS: Petukhov, B.G., Romanov, P.V.

TITLE: Production of 30KhGSA Steel to Higher Specifications as to
Macrostructure and Mechanical Properties (Proizvodstvo stali
30KhGSA s povyshennymi trebovaniyami po makrostrukturi i
mekhanicheskim svoystvam)

PERIODICAL: Sb., tr. Kuznetskogo mezhobl. pravl. Nauchno-tekhn. o-va
chernoy metallurgii, 1956, Vol 1, pp 50-65

ABSTRACT: A description is offered of a smelting, pouring, and heat treatment procedure for 30KhGSA steel and of measures to eliminate rejects due to rectangular segregation, cracks, and mechanical properties. The steel was smelted in a basic 25-t open hearth using the scrap process and cold coke-oven gas. Deoxidation was by Si-Mn, Fe-Si, Al, and Si-Ca. Pouring was from the top, directly from ladle to a 1340 kg ingot. Inspection was of rods rolled from the ingot. It was found that when the pouring temperature was increased rejects due to rectangular segregation dropped from 26.4 to 7.0%, but rejects due to cracks increased. To eliminate cracks, slower cooling of the

Card 1/2

137-58-6-11695

Production of 30KhGSA (cont.)

ingots in the mold was instituted. This was done by covering the pouring trough with a cover. The chemical composition of the steel, within the required limits, affected the mechanical properties. An increase in [C], [Si], and [Cr] increases σ_b and diminishes a_k , while a rise in [P] reduces σ_b and a_k . Optimum mechanical properties are obtained when $(C + Mn + Si + Cr) = 3.2 - 3.4\%$ and the following ratio obtains $C/(C + Mn + Si + Cr) \times 100 = 9.5\%$.

It is observed that the tempering interval of temperatures established by Government Standard makes it possible to obtain satisfactory mechanical properties only when the steel contains 0.30-0.32% C, 0.95-1.0% Mn, 1.0-1.05% Si, and 0.95-1.0% Cr. The optimum conditions for heat treatment have been found to be the following: quenching from 890°C after holding for 40 min in oil at 60-70°C, tempering at 510-520° for 40 min, and cooling in cold oil.

V.N.

1. Steel--Production
2. Steel--Mechanical properties
3. Steel--Test results
4. Steel--Quality control

Card 2/2

ROMANOV, P.V.

Thermokinetic transformations of austenite in steels alloyed with
chromium and manganese or chromium and nickel. Trudy Khim.-met.
inst.Sib.otd.AN SSSR no.14:27-34 '60. (MIRA 14:10)
(Chromium-manganese steel--Metallography)
(Chromium-nickel steel--Metallography)

ROMANOV, P.V.

Experience in the pumping of different petroleums along the same pipeline. Transp. i khran.nefti no.6;34-35 '63. (MIRA 17:3)

1. Kazanskaya perevalochnaya neftebaza.

ROMANOV, P.V.

Phenomena of columnar crystallization in the solid state. Trudy
Khim.-met.inst.Sib.otd.AN SSSR no.14:163-165 '60. (MIRA 14:10)
(Cast iron--Metallography) (Crystallization)

ROMANOV, R.

By the sun assembly-line method. Nauka i zhizn' 28 no.9:52-57
S '61. (MIRA 14:12)

(Champagne (Wine))

ROMANOV, R.

P.J.Zhukov's automatic assembly-line system. Izobr.v SSSR 2
no.5:8-10 My '57. (MLRA 10:7)
(Bottling machinery) (Assembly-line methods)

AUTHOR:

Romanov, Rafail Gavrilovich, SOV/ 161-58-1-9/33
Candidate of Economic Sciences, Senior Pedagogue at
the Chair of Political Economy at the Moscow Institute of
Power Engineering

TITLE:

Some Problems Concerning the Economy of Organosilicon
Insulation (Nekotoryye voprosy ekonomiki kremniyorganicheskoy
izolyatsii)

PERIODICAL:

Nauchnyye doklady vysshey shkoly, Elektromekhanika i
avtomatika, 1958, Nr 1, pp. 60 - 68 (USSR)

ABSTRACT:

In this paper the fundamental results of investigations
concerning the economy of organosilicon insulation are
exposed. These investigations were conducted by the author
in collaboration with the Doctor of Technical Sciences
V. A. Golubtsova under the supervision of the Corresponding
Member AS USSR. Professor V. I. Veyts. Inspite of its
valuable technological properties this type of insulation
has not found a wide application. The reason for this are
the high prices. It is necessary to proceed from a
comprehensive basis in the determination of the economy
of a new technical element. In spite of the high costs of

Card 1/3

Some Problems Concerning the Economy of
Organosilicon Insulation

SOV/ 161-58-1-9/33

organosilicon insulations, their application reduces the capital investments by 28 to 42%, if they are used in the electric motors of coal-cutting machinery. The authors are of the opinion that when organosilicon insulations are used the increase of the operational safety of these motors is attained at the expense of high expenditures. In order to attain a higher economic efficiency of this new type of insulation, a step-up and a perfection of the production of organosilicon compounds and of electric insulation material based upon these compounds is necessary. Even at the present high prices the utilisation of this type of insulation is economically expedient. In order to utilise all possibilities offered by this insulation it is expedient to construct new electric machines and apparatus of smaller dimensions, maintaining the old output. The Scientific Research Institute of the Electrical Industry has already designed new d. c. machines using organosilicon insulations. There are 1 table and 3 references. which are Soviet.

Card 2/3

Some Problems Concerning the Economy
of Organosilicon Insulation

SOV/161-58-1-9/33

The publication of this article was recommended by the Chair
of Power Economy at the Moscow Institute of Economic Engineering
imeni Ordzhonikidze (Kafedra ekonomiki energetiki Moskovskogo
inzhenerno-ekonomiceskogo instituta im. Ordzhonikidze).

ASSOCIATION: Kafedra politicheskoy ekonomiki Moskovskogo energeticheskogo
instituta (Chair of Political Economy of the Moscow Institute
of Power Engineering)

SUBMITTED: January 28, 1958

Card 3/3

L.4/199-66 CNT(m)/CWP(j)/I IIP(c) WW/RM
ACC NR: AP6015673 (A)

SOURCE CODE: UR/0413/66/000/009/0076/0076

INVENTOR: Lazaryants, E. G.; Aleshin, A. M.; Gromova, V. A.;
Zemit, S. V.; Kopylov, Ye. P.; Kosmodem'yanskiy, L. V.; Romanova, R. G.; Troitskiy,
A. P.; Tsaylingol'd, V. L.; Shikhalova, K.P.; Shushkina, Ye.N.; Kostin, D. L.

ORG: none

TITLE: Preparation of divinyl-alpha-methylstyrene rubber. Class 39,
No. 181294 ✓

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9,
1966, 76

TOPIC TAGS: rubber, methylstyrene rubber, alpha methylstyrene, divinyl

ABSTRACT: This Author Certificate introduces a method of preparing divinyl-alpha-methylstyrene rubber by emulsion copolymerization of divinyl with alpha-methylstyrene at 20C and above in the presence of persulfate initiators and emulsifiers. To increase the polymerization rate and improve the conditions for the granular coagulation of latex, commercial grades of sodium salts of the synthetic fatty acids C₁₀-C₁₆

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UDC: 678.762.2-134.62

L 44199-66

ACC NR: AP6015673

are suggested as emulsifiers in the following composition (%): C₁₀, 5-7; C₁₁, 12-14; C₁₂, 16-17; C₁₃, 15-17; C₁₄, 12-13; C₁₅, 9-10; C₁₆, 7-8; below C₁₀ and above C₁₆, 15-20. [Translation] [LD]

SUB CODE: 11/ SUBM DATE: 12Mar62/

Card 2/2 JS

CHILIKIN, M.G.; ROMANOV, R.G.

Grigorii Mitrofanovich Zhdanov (on the occasion of his 60th birthday
and the 30th anniversary of his scientific and pedagogic work). Avtom.1
telem. 20 no.2:263 F '59. (MIRA 12:3)
(Zhdanov, Grigorii Mitrofanovich, 1899-)

ANDRIANOV, Kuz'ma Andrianovich. Prinimali uchastiye: PARKSHEYAN, Kh.R.;
ROMANOV, R.G.; SEMENKO, P.Ya.; ZABYRINA, K.I.. red.:
KALITYANSKIY, V.I., red.; KORITSKIY, Yu.V., red.; MVAL'KOVSKIY,
A.V., red.; EPSHTEYN, L.A., red.

[Macromolecular compounds for electrical insulation] Vysoko-
molekuliarnye soedineniya dlja elektricheskoi izoliatsii. Mo-
skva, Gos. energ.izd-vo, 1961. 327 p. (Polimery v elektroizo-
liatsionnoi tekhnike, no.1) (MIRA 15:2)
(Electric insulators and insulation) (Polymers)

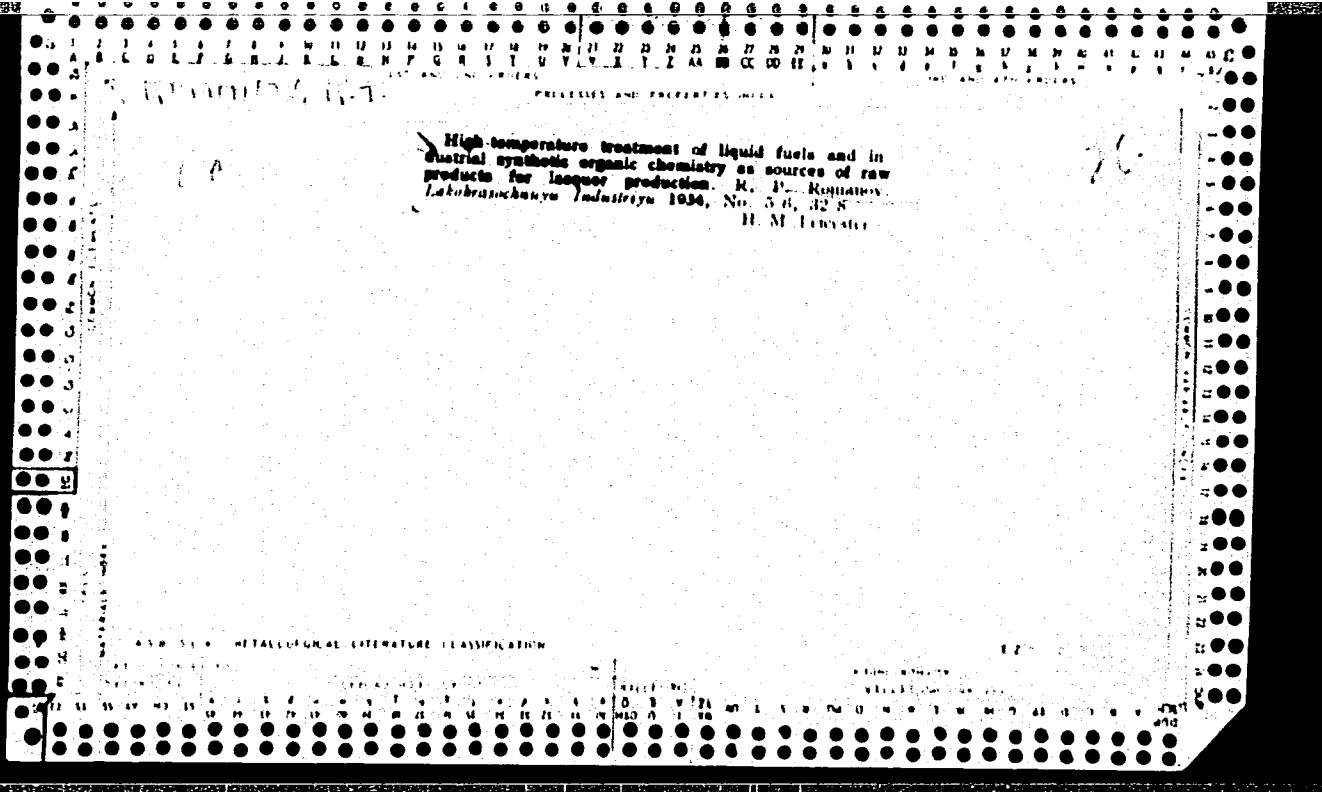
PARKSHEYAN, Kh.R.; ROMANOV, R.G.

Study of technological and economic indices of performance
of the insulation of mass-produced electric motors. Trudy
VEI 71:210-232 '63. (MIRA 17:8)

RCMANOV, R.I.; POLYAKOV, A.S.

Automatic press for trimming valve arms. Avt. prom. 30 no.112
38 N 164 (MIRA 18:2)

1. Gor'kovskiy avtomobil'nyy zavod.



Co
Rearrangement of various investigations carried out in the plant "Khimgas" during 1926-1931 on cracking and refining. M. B. Markovich. Materials on Cracking and Chem. Treatment of Products Obtained, Khimzotnef (Leningrad) No. 2, 58-60 (1935). Cracking of Grossy paraffinic fuel oil, combined cracking devolatilization of the fuel oil by light cracking and a simultaneous deep cracking of the light distillates. M. B. Markovich, R. P. Romanov, D. A. Chernyaev and G. A. Isakov. Vapor-phase cracking of Veimara and Kaspairs shale tars. E. I. Aron, et al. Treating vapor-phase-cracked gasoline with fuller's earth. K. V. Bart, D. A. Chernyaeva and E. V. Bart. Air-dry fuller's earth is about 5% less active than the completely dried product. The fuller's earth cannot be completely recovered by extn. and the recovered product is about 5% less active than the fresh product. Better refining results are obtained in passing the gasoline slowly; consumption of fuller's earth is then higher. A complete poisoning of fuller's earth was observed at an earth: gasoline ratio of 1:144. About 2% of polymers are obtained in the treatment. The best refining temp. for fuller's earth is 130-140°, although the gasoline should be kept in the vapor phase. The refining with fuller's earth is satisfactory, although the color and odor remain. The fuller's earth causes very little resistance to the flow of

gasoline vapors. The domestic "gumbein" clay is 15% less efficient than fuller's earth. Determining benzene in the pyro gasoline and vapor phase cracked gasoline. N. A. Nazarov and S. S. Khain. Distribution of benzene and toluene in various fractions of the vapor-phase cracked gasoline and the method for their separation. N. D. Gedaskina, Yu. N. Petrova, E. A. Balandina and K. A. Malkovich. Investigation of commercial possibilities of extracting C_6H_6 and $C_6H_5CH_3$ from the gasoline as compared with the process of aromatizing petroleum products, of mononitrotoluene from the vapor-phase "toluene" concentrate. Application of the Berezov method in the analysis of vapor-phase-cracked gasoline. V. A. Balandina. Negative results. Method for investigating the chemical composition of vapor-phase-cracked gasolines. N. D. Gedaskina, Yu. N. Petrova and V. A. Balandina. Detg. the aromatics in cracked gasolines and similar products by the "specific gravity" method. A. F. Dubeyanskii and Yu. N. Petrova. Pre-

paring varnish driers from the benzene overhead. S. A.
Nazarov. A. A. Prochilinak

ASB-5A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6"

LEONOV, D., inzh. (Moskva); SLITKOV, Ye., inzh. (Moskva); BOCHKAREV, A.,
slesar' (g. Yelabuga, Tatarskaya ASSR); ROMANOV, S., inzh.;
UGOL'NIKOV, A.; YANITSKIY, G., uchitel' (Moskva); TASLITSKIY, M.;
SADOVNIKOV, I. (g.Oblast' Obinsk, Kaluzhskaya oblast')

Suggested, created, introduced. Izobr.i rats. no.1:14-15 '63.
(MIRA 16:3)

1. Institut "Orgtekhnstroy", g. Odessa (for Romanov). 2. Moskovskiy
pochtamt i chlen soveta Vsesoyuznogo obshchestva izobretateley i
ratsionalizatorov (for Ugol'nikov). 3. Sotrudnik Gosudarstvennogo
instituta po vnedreniyu perevodovykh metodov rabot i truda v
stroitel'stve Ministerstva stroitel'stva RSFSR, Moskva (for
Taslitskiy).

(Technological innovations)

ROMANOV, S.

How we distribute living quarters. Sov. profsoiuzy 18 no.17:
18-20 S '62. (MIRA 15:8)

1. Predsedatel' zavodskogo komiteta zavodskogo komiteta
vagonostroitel'nogo zavoda, g. Kalinin.
(Kalinin--Housing) (Kalinin--Railroads--Cars)

ROMANOV, S.

Education in the service of the progress of mankind. Vsem. prof.
dvizh. no.5:44-48 My '62. (MIRA 15:6)

1. Sekretar' Mezhdunarodnoy federatsii profsoyuzov rabotnikov
prosveshcheniya (proizvodstvennyy otdel Vsemirnoy federatsii
profsoyuzov).
(Education)

ROMANOV, S., podpolkovnik.

Infrared technology. Tankist no. 4:54-57 Ap '58. (MIRA 11:5)
(Infrared rays) (Tank warfare) (Communications, Military)

ROMANOV, S.

Urban development in Estonia. Zhil. stroi. no.11:2-6 ■ '60.
(MIRA 13:11)

1. Chlen Gosstroya Estonskoy SSR.
(Estonia—City planning)
(Estonia—Apartment houses)

Reprint Nov. 1958

ROMANOV, S., podpolkovnik.

Communication and signaling with infrared rays. Voen. sviaz. 16 no.1:
44-46 Ja '58. (MIRA 11:2)

(Infrared rays)

ROMANOV, S., inzh.

Mechanic Shchadilov received the Lenin Prize. Izobr. i rats.
no. 8:19 Ag '61. (MIRA 14:9)

(Clockmaking and watchmaking--Technological
innovations)

NIKOLAYEV, Fedor Fedorovich; ROMANOV, S.A.; MAZUROV, D.Ya.

[High clinker production in 150 meter rotary kilns] Vysokie s"emy klinkera na 150-metrovых vrashaiushikhsia pechakh. [Literaturnaia zapis' S.A.Romanova i D.IA.Mazurova] Moskva, Gos.izd-vo lit-ry po stroit.materialam, 1952. 89 p.

(MLRA 6:7)
(Cement)

ERLIK, M.S.; ROMANOV, S.A.

Competing for the fulfillment of the seven-year plan ahead of time. Tekst.prom. 19 no.8:82-83 Ag '59. (MIRA 13:1)

1. Glavnnyy inzhener tonkosukonnoy fabriki im. Sverdlova (for Erlik). 2. Inzhener po tekhnicheskoy informatsii tonkosukonnoy fabriki im. Sverdlova (for Romanov).
(Textile industry)

PEREKRESTOVA, O.; ROMANOV, S.A.

Valuable suggestion made by weaver G. Cheredina. Tekst. prom.
19 no.5:97 My '59. (MIRA 12:10)
(Weaving)

ERLIK, M.S.; ROMANOV, S.A., inzh. po tekhnicheskoy informatsii

Resolutions of the June Plenum of the Party's Central Committee
put into effect. Tekst. prom. 19 no.9:52-53 S '59.

(MIRA 12:12)

1. Glavnyy inzhener tonkosukonnoy fabriki imeni Sverdlova (for Erlik).
(Textile industry)

ROMANOV, S. M.

Dividing the KirgMiz S.S.R. into regions based on hydrolic
modules. Izv. Kir. fil. Geog. ob-va SSSR no. 3:149-169 '62.
(MIRA 15:10)

(Kirghizistan—Irrigation)

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6

B.A.

AII - 8

Abstract of preliminary findings of research on their conductivity
to metals. C. H. Runssarov (C. R. Acad. Sci. U.R.S.S., 1940, No.
27-300).
H. TAUBER.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6"

Romanov, S. N.

FA 11/49T71

USSR/Medicine - Nerves

Aug 48

Medicine - Irritation

"Effect of the Length of Irritation on the Degree
of the Ability of Nerve Cells to Associate Dyes,"
S. N. Romanov, Gen Morph Sec, Inst Experimental
Med, Acad Med Sci USSR, 3½ pp

"Dok Ak Nauk SSSR" Vol LXI, No 4

Reports experiments on cerebrospinal ganglia of
rabbits. Results show that prolonged stimulation
increases their affinity for both acid and basic
dyes. Submitted 28 May 48.

11/49T71

ROMANOV, S. N.

TA 24/107B3

USSR/Medicine - Neurons
Medicine - Irritation

Aug 48

"Status of Pigmentation in Nerve Cells at Various Intervals After Irritation," S. N. Romanov, Inst of Experimental Med, Acad Med Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LII, No 5

Concludes that the efferent reaction of nerve cells in response to external stimulus is directed, within certain intervals, toward an increase in resistance against external stimulus. After such an irritation, the nerve cells pass through a period of increased stability to the irritating agent.

24/49T93

ROMANOV, S. F.

PA 54/49T83

USER/Medicine - Shock, Effect on Nerve Mar/Apr 49

Cells

Medicine - Neuropathology

"Changes in the Sorption Characteristics of a Rabbit's Nerve Cells in Traumatic Shock," S. N. Romanov, Dept. of Gen. Morph., Inst. of Experimental Med., Acad. Med. Sci. USSR, 10 pp.

"Zhur. Obshch. Biol." Vol. X, No. 2

Studied changes in nerve cells of the spinal ganglia of a rabbit suffering traumatic shock. Shock was caused by traumatism of the soft tissues of the hind legs. Nerve cells were colored in vitro and studied

54/49T83

USER/Medicine - Shock, Effect on Nerve Mar/Apr 49
Cells (Contd)

under a microscope. Experimental results supported the neurogenic theory of traumatic shock.

54/49T83

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6

ROMANOV, S. N.

32713. Nliyaniye predvarited'nogo deystviya razdrazhezhitelya (spirit, temperatura) na velichinu tokov povrezhdeniya myshts. Doklady akad. Nauk, ssr, novaya seriya, T. LVI, No. 6, 1949, s. 1139-42

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001445220016-6"

CA ROMANOV, S.V.

118

Effect of various concentrations of alcohol on sorptive power of cells of sympathetic and animal nervous systems.
S. N. Romanov (Inst. Kapt. Med., Acad. Med. Sci. U.S.S.R.). *Doklady Akad. Nauk S.S.R.* 60, 473-6 (1949).—*In vitro* experiments with dissected specimens of rabbit nervous system in neutral red saline showed that the absorption of the dye has a minimum at 4% EtOH concn., rises to a plateau at 10-14%, and rises sharply up to 22% EtOH concn. in sympathetic ganglia. The sensory ganglia give a similar curve, displaced by 6% to the higher EtOH concn. Immersion for 5 mins. in 5% EtOH lowers absorption on subsequent immersions in higher concns., indicating a protective mechanism of the tissues.
G. M. Konolapoff

(BA- A III Ap '53:409)

BOGDANOV, S. N.

Romanov, S. M.

"The reaction of the nerve cells to the effect of inadequate and adequate stimuli." Acad Sci USSR. Inst of Physiology imeni I. P. Pavlov. Leningrad, 1956 (Dissertation for the degree of Doctor in Biological Sciences)

Knizhnaya letopis'

No. 25, 1956. Moscow

ROMANOV, S.N.

Relation of sorption properties of the brain in mice to resistance to strychnine. Doklady Akad. nauk SSSR 89 no.4:753-755 1 Apr 1953.
(CLML 24:4)

1. Presented by Academician K. M. Bykov 17 January 1953. 2. Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR.

ROMANOV, S.N.

Changes in sorptive properties of nerve cells of cat brain under the
influence of conditioned reflex stimulant. Doklady Akad. Nauk S.S.R.
90, 117-20 '53. (MLRA 6:4)
(CA 47 no.16:8208 '53)

ROMANOV, S.N.

Reaction of body cells to the sound of explosion. *Fiziol.zhur.*
40 no.1:86-89 Ja-F '54. (MLRA 7:2)

1. Laboratoriya gistoziologii Instituta fiziologii im. I.P.
Pavlova Akademii nauk SSSR, Leningrad.
(Noises--Physiological effect)

ROMANOV, S.N.

Reactive changes observed in the neurons of the encephalon in the course of excitation of peripheral nerves. Dokl. AN SSSR 115 no.4: 841-844 Ag '57. (MIRA 10:12)

1. Institut fiziologii zhivotnykh im. I.P. Pavlova AN SSSR. Predstavleno akademikom K.M. Bykovym.
(BRAIN)

~~ROMANOV, S.N.~~

Changes in the sorption properties of cerebral neurons of mice
following the stimulation of gastric receptors. Dokl. AN SSSR
115 no.6:1224-1226 Ag '57. (MIRA 11:1)

1. Institut fiziologii im. I.P. Pavlova AN SSSR. Predstavлено
академиком К.М. Быковым. (MERVES)

L 14287-66 RD
ACC NR: AT6003871

SOURCE CODE: UR/2865/65/004/000/0367/0372

AUTHOR: Romanov, S. N.; Romanova, R. A.; Monastyrshina, Z. I.

ORG: none

17
BT/

TITLE: Nature of the biological effect of vibration

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 367-372

TOPIC TAGS: biologic vibration effect, cell physiology, tissue physiology, mouse

ABSTRACT: The effects of vibration on mouse tissue cells in situ and in vitro were investigated. For the in situ experiments, 6 mice were placed in individual compartments of a metal container, which was then vibrated at 25-75 cps for 30 min with a vibration amplitude of 2 mm. A 0.5% neutral red solution was injected (1 ml/30 g) prior to vibration. The following results, considered preliminary by the authors, were obtained: 1) The cells of mice exposed to vertical vibration showed a change in ability to absorb tissue stain. 2) Cells of different organs showed varied sensitivity to vibration. The most noticeable reactions took place in the kidneys and cerebellum, while less noticeable reactions were exhibited by sub-cortical and muscle cell nuclei. The cells of the liver, intestine, and especially the spleen failed to react to vibration. 3) The degree of cell reactivity mainly depended on vibration frequency (see Table 1).

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L 14287-66

ACC NR: AT6003871

Table 1. Change in the stainability of mouse tissue exposed to vibration (*in situ*)

Organ and tissue	Control		25 cps			50 cps			75 cps		
	M ± s	%	M ± s	%	P	M ± s	%	P	M ± s	%	P
Cortex	12.8 ± 1.1	100	14.5 ± 0.88	115	0.211	14.3 ± 1.15	113.5	0.287	17.6 ± 1.06	140	0.004
Subcortex	10.3 ± 0.9	100	22.0 ± 3.25	212	0.001	11.5 ± 0.76	111.5	0.331	14.0 ± 0.73	138	0.012
Cerebellum	7.7 ± 0.8	100	10.1 ± 0.64	131.5	0.015	8.3 ± 0.72	104	0.435	11.0 ± 0.72	154	0.000
Medulla oblongata	6.2 ± 0.6	100	7.4 ± 0.31	119.5	0.030	5.6 ± 0.34	90.5	0.435	9.1 ± 0.54	147	0.005
Liver	11.6 ± 0.7	100	11.7 ± 0.49	101	1.000	11.9 ± 0.71	102	0.844	13.7 ± 0.72	118	0.051
Kidney	8.1 ± 0.8	100	18.4 ± 1.59	228	0.000	15.0 ± 0.94	185	0.001	19.8 ± 1.83	244	0.000
Spleen	11.6 ± 1.3	100	9.3 ± 0.27	80.1	0.128	11.2 ± 0.74	97	0.844	10.0 ± 0.71	86.5	0.331
Intestine	10.8 ± 1.5	100	12.1 ± 1.0	114	0.493	10.2 ± 1.27	106	0.768	11.3 ± 0.88	110.5	0.768
Muscle	1.6 ± 0.3	100	1.9 ± 0.05	118.5	0.435	1.6 ± 0.45	100	1.000	2.7 ± 0.44	163	0.042

Card 2/3

136287-66

ACC NR: AT6003871

The second series of tests involved in vitro tissue staining under the same vibration conditions. Tissue samples were stained after 30-60 min or immediately after vibration with a 0.01% neutral red solution for 10 min. The results of this test substantiated the hypothesis that various tissues of the organism show differing sensitivity to vibration. The reasons for these differences are not clear.

It was concluded that, regardless of the presence or absence of a specific receptor, all cells are able to nonspecifically react to vibration as they are able to react to any other stimulus of sufficient intensity. In the opinion of the authors, the cellular approach to the effects of vibration is important in isolating primary foci associated with the pathogenesis of vibration sickness. In addition, the cellular approach is of theoretical interest in elucidating the biological effects of vibration and will be the thesis of future investigations by the authors. Orig. art. has: 1 table. [AD PRESS: 4091-17]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 009

PC

Card 3/3

ROMANOV, S.N.; ROMANOVA, R.A.; MONASTYRSKINA, Z.I.

Nature of the biological effect of vibration. Probl. kosm. biol.
4;367-372 '65. (MIRA 13;9)

SKORIK, V.I.; ROMANOV, S.N.

Changes in the intra-vitam staining capacity of animal tissues
following whole-body X irradiation. TSitolotiia 2 no.6:710-716
N-D '60. (MIRA 13:12)

1. Otdel gigiyeny atmosfery vozdukhha Instituta radiatsionnoy
gigiyeny Ministerstva zdravookhraneniya RSFSR i Laboratoriya
obshchey nervno-myshechnoy fiziologii Instituta fiziologii AN
SSSR, Leningrad.

(X RAYS--PHYSIOLOGICAL EFFECT)
(ABSORPTION (PHYSIOLOGY))

POLYANSKIY, Yu.I., otv.red.; ALEKSANDROV, V.Ya., red.; GINETSINSKIY, A.G.,
red.; ZHUKOV, Ye.K., red.; ZHIRMUNSKIY, A.V., red.; KARASIK, V.M.,
red.; KIRO, M.B., red.; LOZINA-LOZINSKIY, L.K., red.; NIKOL'SKIY,
N.N., red.; PARIBOK, V.P., red.; ROMANOV, S.N., red.; SVETLOV,
P.G., red.; SOKOLOV, I.I., red.; TROSHIN, A.S., red.; USHAKOV,
B.P., red.; SHERSTOBITOV, O.Ye., red.izd-va; PEVZNER, R.S.,
tekhn.red.

[Problems in cytology and general physiology] Voprosy tsitologii
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1. Akademiya nauk SSSR. Institut tsitologii. 2. Institut evo-
lyutsionnoy fiziologii im. I.M.Schenova AN SSSR, Leningrad (for
Ginetsinskiy). 3. Fiziologicheskiy institut im. A.A.Ukhtomskogo pri
Leningradskom universitete im. A.A.Zhdanova (for Zhukov). 4. Insti-
tut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR,
Leningrad (for Karasik). 5. Institut tsitologii AN SSSR, Leningrad
(for Kiro, Paribok, Sokolov). 6. Institut fiziologii im. I.P.Pavlova
AN SSSR, Leningrad (for Romanov). 7. Laboratoriya embriologii
Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad (for
Svetlov). 8. Laboratoriya fiziologii kletki Instituta tsitologii
AN SSSR, Leningrad (for Troshin). 9. Laboratoriya srovnitel'noy
tsitologii Instituta tsitologii AN SSSR, Leningrad (for Ushakov).

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General Problems.

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Author : Romanov, S. N.

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Title : The Changes of Sorptive Properties of Neurons of
the Cerebrum of Mice in Stimulation of the Stomach
Receptors.

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Abstract: With the aid of intra-vitam staining of the cerebrum, it was discovered in vitro that 5 min. after a strong burn of the mucosa or serosa (S) of the stomach, the magnitude of stain sorption increased, with a subsequent decrease. After lubrication of S with turpentine the rise of sorption was not accompanied by a lowering, stimulation of both sci-

Card 1/2

Name: ROMANOV, Sorgoy Nikitich

Dissertation: Reaction of Nerve Cells to the Action of Inadequate and Adequate Stimuli

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Affiliation: [not indicated]

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AUTHOR: Romanov, S. N.

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TITLE: Changes in the Sorptional Properties of the Brain
Neurons of Mice in the Case of Excitation of
Stomach Receptors (Izmeneniya sorbtionnykh svoystv
neuronov golovnogo mozga myshey pri razdrazhenii
retseptorov zheludka).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Nr 6, pp. 1224-1226
(USSR)

ABSTRACT: At present an extensive material of facts on the cortico-visceral connections was accumulated. Their mechanism is, however, not sufficiently investigated. Systematic investigations of the changes occurring in neurons, when internal organs are excited, are missing. For this purpose the author employed the method of a vitro-dyeing of the brain. The modification of the sorptional properties of the cellular protoplasm by nervous impulses was proved by several earlier publications. From them may be concluded that in case that the impulses penetrate from the interoceptors to the cortical cells, one or the other modification of

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the sorptional properties may be expected in those latter. Mice were used as test animals. After a narcosis the exposed stomach was very much scalded. After the lapse of various periods the animals were killed, the brain after 10 minutes dipping into Rigner-solution was placed in dye for 15-30 minutes. From figure 1 may be seen that 5 minutes after the scald of the stomach the brain showed an increased affinity to the dye, this increase amounting to 12 %. The figure is statistically credible. Later on the sorptional value considerably decreases. 40 minutes after the scald it lies 9 % lower than the control (also statistically credible). After 2 hours the sorptional value in the control and in the test are practically equal. From the 3 test series the author obtained results which indicate substantial changes in the brain neurons. In these tests the author never observed so large shifts of the sorptional properties of the brain neurons as this is the case in excitations

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of the Nervus ischiadicus. It seemed to be logical that the above-mentioned modifications may be intensified by a simultaneous excitation of the intero- and exteroceptors. For this purpose the author smeared the serose of the stomach with turpentine. 10 minutes later the N. Ischiadicus of both extremities was excited by an induction current for 5 minutes respectively. The results (figure 2) were surprising: instead of an increased coloring, a coloring was attained which was similar to the control. Thus the sorptional increase due to the action of turpentine upon the stomach is canceled by the excitation of the N. ischiadicus. This fact requires further investigations. There are 2 figures and 10 Slavic references.

ASSOCIATION: Institute for Physiology AN USSR imeni I. P. Pavlov
(Institut fiziologii im. I. P. Pavlova Akademii Nauk
SSSR)

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Changes in the Sorptional Properties of the Brain 20-6-47/43
Neurons of Mice in the Case of Excitation of Stomach Receptors

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